

What is claimed is:

1. A backlight unit comprising:

a light guide panel (LGP);

a point light source emitting light and arranged at an edge of the LGP; and

a refraction member being positioned between the point light source and the LGP,

wherein the refraction member is shaped to refract the light emitted from the point light source toward the optical axis of the point light source in order to reduce the azimuth angle of the light that is incident upon the LGP.

2. The backlight unit of claim 1, wherein the refraction member comprises a prism array of V-shaped prisms, the V-shaped prisms comprise apexes facing the LGP.

3. The backlight unit of claim 2, wherein the apex is formed by an angle between 80° and 120° , inclusive.

4. The backlight unit of claim 2, wherein the refraction member further comprises a transparent member wherein the prism array is attached to the transparent member on a side adjacent the LGP.

5. The backlight unit of claim 1, wherein the refraction member further comprises a transparent portion arranged along the optical axis of the light source, wherein the transparent portion is shaped to prevent light emitted from the light source from being totally reflected.

6. The backlight unit of claim 5, wherein the width of the transparent portion is determined so that the full width half maximum (FWHM) of the light emitted by the light source and incident upon the LGP is at a minimum value; and the light flux/steradian is at a maximum value.

7. The backlight unit of claim 5, wherein the transparent portion is formed to allow light emitted from the point light source within an angle of $\pm 12^\circ$ with respect to the optical axis of the point light source to pass through.

8. The backlight unit of claim 5, wherein a plurality of light sources and transparent portions are provided in a one-to-one relationship.

9. The backlight unit of claim 2, wherein the refraction member further comprises a transparent portion arranged along the optical axis of the light source, wherein the transparent portion is shaped to prevent light emitted from the light source from being totally reflected.

10. The backlight unit of claim 9, wherein the transparent portion is formed in the prism array by removing a portion of the V-shaped prisms that are arranged within a predetermined angle with respect to the optical axis of the light source.

11. The backlight unit of claim 9, wherein the transparent portion is formed by removing a portion of the prism array that is arranged within a predetermined angle with respect to the optical axis of the light source.

12. The backlight unit of claim 9, wherein the width of the transparent portion is determined so that the full width half maximum (FWHM) of the light emitted by the light source and incident upon the LGP is at a minimum value; and the light flux/steradian is at a maximum value.

13. The backlight unit of claim 9, wherein the transparent portion is formed to allow light emitted from the point light source within an angle of $\pm 12^\circ$ with respect to the optical axis of the point light source to pass through.

14. The backlight unit of claim 13, wherein the light allowed to pass through the transparent portion is not refracted by the prism array.

15. The backlight unit of claim 1, wherein the refraction member and the LGP are discrete elements.

16. The backlight unit of claim 1, wherein the refraction member is united with the LGP.

17. The backlight unit of claim 1, wherein the refraction member is connected to the LGP at peripheral edges to form a hollow portion therebetween.

18. The backlight unit of claim 1, wherein a hologram pattern having a diffraction grating structure is formed on the LGP.

19. The backlight unit of claim 1, wherein a scattering pattern is formed on the LGP.

20. The backlight unit of claim 9, wherein a plurality of light sources are provided, and the plurality of light sources and transparent portions are provided in a one-to-one relationship.

21. A backlight unit comprising:

a light guide panel (LGP); and

a point light source emitting light at an edge of the LGP,

wherein a refraction member is formed in the LGP to refract light emitted from the point light source as it enters the LGP,

wherein the refraction member is shaped to refract the light emitted from the point light source toward the optical axis of the point light source.

22. The backlight unit of claim 21, wherein the refraction member comprises:

a hollow portion extending in a direction parallel to a light emitting surface of the LGP on a side of the LGP adjacent to the light source; and

a prism array of V-shaped prisms arranged on an edge of the hollow portion adjacent to the light source,

wherein the V-shaped prisms comprise apexes extending into the hollow portion.

23. The backlight unit of claim 22, wherein the apex is formed by an angle between 80° to 120° , inclusive.

24. The backlight unit of claim 22, wherein the refraction member further comprises a transparent portion arranged along the optical axis of the light source, wherein the transparent portion is shaped to prevent light emitted from the light source from being totally reflected.

25. The backlight unit of claim 24, wherein the transparent portion is formed in the prism array by removing a portion of the V-shaped prisms that are arranged within a predetermined angle with respect to the optical axis of the light source.

26. The backlight unit of claim 24, wherein the width of the transparent portion is determined so that the full width half maximum (FWHM) of the light emitted by the light source and incident upon the LGP is at a minimum value; and the light flux/steradian is at a maximum value.

27. The backlight unit of claim 24, wherein the transparent portion is formed to allow light emitted from the point light source within an angle of $\pm 12^\circ$ with respect to the optical axis of the point light source to pass through.

28. The backlight unit of claim 24, wherein a plurality of light sources and transparent portions are provided in a one-to-one relationship.